

Chapter VII

THE CONCEPT

ONE of the differences that we noted between the percept and the mental image was that the percept does not alter, but the image may change very much. A percept is always definite. Being a mental copy of a present object, if that object does not change neither can the percept of it change. But images, we said, *became general* in course of time. This is how it happens.

217. If our experience is limited to a single specimen of a class, the mental image is a definite picture. The idea, like the experience, is limited. But as experience is extended our image expands, and the more examples we know of objects of the same class the less definite is our mental image, until at last the idea becomes so general, so indefinite, that the word which used to bring into our minds a definite image no longer does so. The word still stands for an idea, but a different sort of idea.

218. Thus, if I say to you 'King Edward VII was a fine-looking man,' the word *man* calls up in your mind a definite image. It is limited to the notion of an individual. It is a portrait of King Edward as you saw him or saw photographs of him. But if I quote, 'The proper study of mankind is man,' the word *man* calls up no mental image. It has now such a wide, general significance that its particular significance is lost. *Man* in the first example is a concrete notion; *man* in the second

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is an abstract notion. We call it abstract because we arrive at it by abstracting (or drawing away) from the total qualities that we attribute to objects of one kind or class whatever qualities we find to be common to all of them, and the combination of these gives us a general notion of that class. This wide, general notion is called a concept, an 'idea' in the strictly technical use of that term. I want to say a good deal presently about those two terms, concrete and abstract, because I find that they are very commonly misunderstood, and the misunderstanding has caused some fundamental mistakes in music teaching.* We cannot stop to say much about these mistakes just now; it is sufficient to say that the concrete is that which is discernible by the senses.* Perception deals with the concrete, conception with the abstract.

219. The little child's first step towards forming general notions of things is a rude classification of the objects in his immediate world. Classification means arrangement by the observation of likenesses and differences. At this early stage, however, there is little observation of differences, little comparison at all, in fact. As the child's

* When I ask a class of students, 'What do you understand by the concrete?' in nine cases out of ten the reply is, 'That which you can see and handle.' . . . The misunderstanding is very general, and has given rise to serious mistakes in music teaching. (See article in Appendix, reprinted from *Child Life*.) *See* and *handle*, yes; but also *hear*, and *smell*, and *taste*. The concrete is that of which you became conscious through any of the senses, and the pupil learns in the concrete that which comes to him through any sense; not hand and eye alone, as people seem to believe, but ear or nose, or palate, or muscles, or skin, according to the nature of the knowledge he is in search of.

acquaintance with his surroundings grows, he begins to be conscious of resemblances between things, and very soon we hear him say 'that's like' So-and-so. Professor Sully instances a child just over two years old who, watching a dog panting after a run, said 'Dat like puff-puff.' So, in the child's mind, objects arrange themselves in groups according to real or imaginary likenesses between them, and things that are 'like' each other he calls by the same name. All large four-footed things are 'gee-gees' for a time; all soft furry things are 'pussies.' A fur muff is a real pussy to the little one who only sees the likeness and does not notice that it has no tail, no eyes, no movement, and no *miaw*. At this stage, memory is only budding; there is probably little mental imagery at all. But gradually definite images begin to arise and are easily called up by words. From that point we can trace the development of the general notion from the particular notion, the concept from the percept. For instance:—

220. In response to the word *cat* there comes into the child's mind an image of his own nursery pussy, which may be a tabby. As long as this is the sole cat of his acquaintance the image is definite. But presently other cats come into his world, black cats, white cats, tortoise-shells, and gradually he learns to use *cat* as a class-name. There is still a mental image in answer to the name, but it is blurred; it has only the essential qualities of all cats—the furriness, the purriness, the long tail, the sharp claws, the stealthy tread—and is indefinite as to the variable qualities of size and

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colour. We call this a *generalized image*, and you see that the child arrives at it by grouping together all the likenesses between cats and leaving out all the differences. He keeps his classes separate by naming them. Sully says, 'The name is the bond by which the mind ties together the several members of a class.'

221. By and by the child hears people call cats, dogs, horses, cows, etc., *animals*, and, recognizing a general likeness between the classes, he soon learns to use this new class-name. By looking into your own minds you know that *animal* is a still more indefinite term than *cat* or *dog*. To some of us it brings no mental image at all; we can think *animal* without picturing anything. When that happens we have a concept; but into most minds would come, I think, a vague notion of hairiness and four-footedness.

222. 'In creating a class, such as animal or metal, the child need have no knowledge as to the number of things to be included in it. He has simply invented a new compartment into which he is prepared to put whatever is found to have the necessary qualities.'—*Sully*.

Here we have a different analogy. Instead of bundles of specimens tied up by names, the names are compartments in a cabinet, into which the specimens are put.

223. When the child comes into the teacher's hands he has already a great many of these group-notions; but, his experience being limited, he makes mistakes in his classification. He generalizes from too few examples—an error from which grown-ups are by no means free—and some of

his specimens get 'into the wrong box,' so to speak. As he grows, his rough classification is corrected by his observation of differences, his wider experience, and fuller knowledge.

224. Children think in particular terms. They have mental images, more or less definite, behind the words they use. Grown-up people think in general terms, and use words which call up no mental image either in their own mind or in those of other grown-up people to whom they speak; words like beauty, virtue, politics, human nature, commercialism, etc. And because grown-up educated people think and speak in general or abstract terms, a great deal of the teacher's work, as children grow up, consists in helping them to turn their limited particular notions into wide general notions, or, as some books on education have it, 'to turn their percepts into concepts.'

225. This may sound to you very alarming, but it need not be so; for concept making is a thing the mind does for itself just as surely as it forms percepts or images. It is part of the mind's way of developing. A concept of some sort or other the mind will inevitably form. What the teacher has to do is to provide the kind of experience and the kind of knowledge that will tend to the formation of a *right* concept.

226. Without assistance from any teacher a child will form his own concept of *house*, *animal*, *colour*, or *music*; but without a teacher's help he could not arrive at concepts of *key*, *rhythm*, *gavotte*, or *sonata*. And because concepts are built up out of percepts, we must always make

sure that the pupil has in his memory the necessary percepts for the building up of his concept; for we cannot make bricks without straw. So, from the very beginning and all along the line we must provide the concrete examples from which the percepts will be stored up. But we must not be in a hurry about it, or ply the child with definitions with the idea of 'getting him on'; we must let his concepts grow out of his experience. It is ours to supply the experience, and the names as they are needed. If the teaching is right the concept will take care of itself.

227. Throughout childhood and perhaps for many years the class-name may call up a mental image, more or less generalized, but in course of time even the generalized image disappears and only the name remains. Concepts are wrapped up in names.

TWO ASPECTS OF THE CONCEPT

228. Our general notions may be divided into two classes, sometimes called 'Concrete Concepts' and 'Abstract Concepts.'* We have concepts of *things*, the kind we have been talking about; notions in which certain qualities of objects of the same class are grouped together. The concept includes all the essential qualities, and we feel that they belong to the object and cannot be separated from it or from one another.

* I do not like these terms. Abstract Concept is mere tautology, and Concrete Concept involves a contradiction. Yet some excellent writers use them; perhaps because, writing for teachers, they find that the simplest way of putting the distinction between the static and dynamic aspect of the Concept. For the same reason I follow suit, and find that students see clearly the incongruity of Concrete Concept and understand that we use the terms *faute de mieux*.

229. But we have also concepts of *qualities apart from things*, and we arrive at these in a different way. Instead of grouping together *several* qualities of *one* kind of thing we select *one* quality belonging to *several* things, separable from each, applicable to all. We speak of the whiteness of snow; but we can separate our idea of whiteness from our idea of snow and apply it to a flower, a wedding-gown, or a sheet of notepaper. This class of concept comes from having discovered the same quality in a great number of different things, and hearing the same term used in every case. The little child learns that his bath is hot, his porridge is hot, the fire is hot, the sun is hot, etc., and so he acquires an abstract notion of heat. So with sweetness and sourness, roughness, smoothness, and so on.

230. A qualitative term is first learnt in connection with a particular object—a blue sash, for instance; but presently a child hears the same term applied to a different object—a cup is blue, a book-cover, a dress, a cushion—and gradually the idea of *blueness* is loosened from its concrete connections and becomes an idea in itself, a concept—not of a class of things but of a quality *in* things. Later on come notions of right and wrong, duty, courage, cowardice, truth, unselfishness, fairness, and the like, through intercourse with others, directed conduct, and the gradual growth of ideals. You can recognize the difference between such concepts and those represented by *animal* or *timepiece*, for example, indefinite as these are.

231. Sometimes we have to hasten the formation of certain abstract concepts because they are needed sooner than they could be developed by the child's ordinary experience. Ideas of numbers are among these, and the way in which these abstract notions are taught to little children through the kindergarten occupations has always seemed to me very interesting and beautiful. The child is learning the meaning of *three*, for instance. He builds it in bricks, threads it in beads, weaves it in slips of paper, makes a pattern with it in sticks. There is constant change of material with the persistence of a term, until gradually the idea of three-ness is shaken out, so to speak, from the concrete material, and the child knows that *three* is not bricks, nor beads, nor paper, nor colours, nor sticks, but something that he can only *think*.

232. As an example of the expansion of a definite musical image into a concept we may take this: A child learns his first sonatina. We give him a few elementary ideas about its plan, comparing it with the simpler forms of the little pieces he has already learnt, and the comparison of the new with the old interests him. For some time the word *sonatina* only calls up in his mind an echo of his own little piece. His idea is limited to that. But every *sonatina experience* adds something to his observation of the characteristics of this kind of composition. He compares one sonatina with another, and with your help he finds points of resemblance. So his idea expands, until *sonatina* becomes for him a class-name, and

means for him only a *kind* of piece of which there are numerous examples with common characteristics—though, of course, he could not give you that description of it. In the same way he arrives at concepts of other musical forms.

233. There are abstract notions connected with music, but few that cannot be allowed to grow out of the pupil's growing experience. Pitch, time, rhythm—each of these terms embodies a concept; but to the child who learns them (as he should learn them) in connection with singing and movement, these concepts are very concrete in character. In fact, from the teacher's point of view, music is altogether a concrete subject. There is no need to invent material to illustrate it, as in teaching arithmetic, for the thing itself is always at hand. No need for models or pictures, as in teaching many other subjects; the thing itself is there.

234. In comparing and classifying objects of sight or touch we say to the child, 'look,' 'handle'; in comparing and classifying musical sounds, high and low, long or short, we say 'listen.' What is a scale? Listen. What is a chord? Listen. What is rhythm? Listen. No round-about process of reasoning is necessary in the child's early music lessons; just the tacking on of names to things that he can hear. And as he listens we direct his attention to likenesses and differences, especially differences. The likenesses and differences are discovered by the ear, and the mind classifies and names accordingly. That is what we mean by ear-training. *Mental discrimination of differences in the effect of musical sounds.* The more

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minute the discrimination the better the musical ear, and also *the greater the need for accurate naming*.

235. There is a well-known educational maxim, 'Proceed from the particular to the general.' You can see now why it was formulated. The teacher's way of teaching must conform to the mind's way of learning, and one of the mind's ways of working is just this—it proceeds from the particular to the general.

236. Now, though, strictly speaking, a concept is 'the kind of idea that cannot be reduced to a picture,' the term is often very loosely used. If you notice the use of it in the daily papers and in ordinary books, you will find that what is called a concept is really a generalized image or type. For instance, in the journal of *Educational Psychology* a few years ago a lecturer in an American Normal School gives the result of his inquiry as to his students' 'Concept of a Mile.' He says:

'A few weeks ago I was taking up the subject of the concept with students of a first year class. After some preliminary discussion of the meaning of the word and the various concepts that we possess, I asked every member of the class to explain her concept of a mile. Introspection showed that practically every student had two different concepts; one a purely arithmetical concept, which could be used effectively in doing problems in arithmetic, but was very vague, almost useless in other adaptations; the other, a more practical kind of concept which, for want of a better name, we will call here an empirical concept, that was used with some degree of success in estimating distances. An investigation of this empirical concept revealed the following facts: (a) The exact imagery used was different in the case of each

pupil, and, when thoughtfully used, ordinarily referred to some definite experience of distance, such as the distance between the home and the church, or between the home and the school. (b) Some judged distance by comparing any given distance with a visual image that they knew to be a mile; others, by the *time* taken to walk or ride a mile; and a few by motor images and the feeling of fatigue once experienced in walking a mile. The visual imagery predominated. (c) The nature of the concept used depended largely on the student's environment. The country girl would think, perhaps, of a distance between two cross roads, while the city girl might refer to an experience of a certain number of blocks. (d) The concept not only grew out of a certain environment, but it was almost useless when applied in a foreign environment. In passing from the country to the city, or from either to the seashore or mountains, it was discovered that a new kind of concept had to be built up. (e) There was little feeling of relationship between the arithmetical concept and the empirical concept, except in cases where the numbers were small. (f) It was realized that the arithmetical concept could have no really vital meaning unless it was reinforced by the empirical concept. (g) In most cases the empirical concept had not been affected to any great extent by the influences of the school. (h) The empirical concept usually had its origin in childhood. (i) A large number in the class complained of vagueness in the use of concepts, especially when they referred to long distances. (j) A few pupils had no empirical concept of a mile. A mile to them meant merely some kind of name applied to the measurement of distance. (k) It was realized that it was immaterial what kind of concept was used so long as it could be used with a fair degree of accuracy. (l) Some pupils were troubled by bad methods of learning. One girl, for example, used a measuring unit of a mile and a half (the distance from her home to school). In judging distances she had great difficulty in applying this awkward unit.

'The same kind of introspection was directed to determine the characteristics of the concept for acre. The results were similar, except that about seventy-five per cent. of the

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class confessed that they had no idea of what an acre really meant. Many had a vague arithmetical concept. Other concepts of measurement were considered with like results.'

237. Now, you will have noticed that what each of these students had in mind was not strictly a concept at all, but an image; hardly even a generalized image, but a fairly definite one. Is the term 'concept' justifiable here, and in the usage of the daily papers? I think it is, *provided we realize just how much it means*. For however accurate we may be, and ought to be, in our recognition of the proper significance of the term 'concept,' the fact remains that we do the greater part of our thinking by means of images, more or less generalized. As Titchener puts it:

'Take the abstract idea of "horse." My idea will not be the picture of any special horse, but a picture of average horsiness. . . . As a rule the abstract idea (while it remains abstract as far as meaning is concerned) takes the form of a memory-idea of a particular object. . . . So our abstract horse will have a good deal of some particular horse about it.'

Adams, too, says:

'Theoretically, the kind of general idea which cannot be reduced to a picture is the kind that is properly called a concept. Practically, however, we need the support of the generalized image to assist the mind in dealing with concepts.'

238. The American lecturer quoted above agrees with this. 'It was realized that the arithmetical concept could have no really vital meaning unless it was reinforced by the empirical concept.' I have dwelt upon this because I want you to be clear as to the accurate meaning of *concept*, and

yet to be able to take at its face-value the rather loose use of the term as you may meet with it in your everyday reading.

239. There are other interesting points in that American report. (a) That the imagery which helped those students varied—some had visual images, some motor (the memory of walking a mile). With some it was a time image (how long it took for them to walk a mile), and with others it was actually muscular (the memory of the amount of fatigue experienced in walking a mile). (b) That they used these images *as standards of measurement*. They discovered that they had a standard of space, of time, of endurance, etc. A mental image as a standard is extremely useful. You know how handy it is to be able to take a little packet in your hand and to be able to judge by its weight whether it will go as a letter for a penny or cost threepence as a parcel. The modern teacher of arithmetic is not content that his pupil should rattle off 'twelve inches one foot, three feet one yard,' etc. He makes him verify his tables by actual weighing and measuring, and so gives him an approximate idea or standard of how much a foot is, or a pound, or a gallon. At a boys' school that I know, a one-acre field is fenced off that the boys may have a visual standard by which they may judge of greater or lesser areas. It may be worth noting that the Bank of England building is said to cover exactly an acre.

240. In teaching (and learning) music, mental standards of pitch and of speed are very desirable. Children soon learn to pitch from memory the

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sound C,  and from that, b : a very simple formula, those who use the Tonic Sol-fa syllables learn to pitch tunes in all other keys. You can set up a standard of speed, or *tempo*, by selecting a song which your children know, and which is usually sung at about M.60. 'John Peel' goes very well at that speed, beating once to the measure. Let that song, or some other suitable one, be the standard for M.60. By beating twice to the measure you get M.120, and from these rates other rates can be approximately arrived at.

241. We have now got two of the terms which puzzle the beginner, Percept and Concept, into juxtaposition. By dwelling for a while on the nature of the Mental Image which comes between, and seeing how it is born of the one and merged in the other, even the youngest of my readers should be able to keep them distinct.

242. As the child is presumably about seven years old when he comes into the music teacher's hands, why need we consider the minds and behaviour of animals and babies and very young children as we have been doing?

243. Because mind development is a continuous process, and 'in every branch of inquiry which deals with continuity of process it has been found that the initial stages cannot be disregarded if the development as a whole is to be made clear.'—*Lloyd Morgan*.

244. This principle is commonly recognized. Go into an industrial museum and look at the

exhibits of any of our manufacturers: linen, for example. There will be a picture of the growing flax, in masses of waving blue; another of the fields in which the stalks lie drying after being soaked. There will be dried specimens of the plant, and of the fibre in all its stages, from the rough separation from its gummy flesh till it is ready for spinning and weaving; pictures or models of hand-looms and power-looms, and specimens of the manufactured article, from the coarsest fabrics to exquisite damask and filmy cambric. An exhibit of the making of a big gun, or of a pianoforte, will offer a similar example of development. It is taken for granted that we do not really know a thing until we trace its development from its beginning. And so we must know what the child *has been* if we would understand what he *is*, and lend a hand in making him what he *is to be*.

245. Now the older academic psychology is a study of the adult mind, the complete article, and therefore this academic psychology is not of much practical use to the teacher; but the newer, *genetic* psychology begins at the beginning, watches the first dawning of intelligence in the young child, and studies its development till it overtakes, and merges into, and learns from the psychology that is ages old.

246. Such a study of the mind's behaviour at various stages is of immense practical use to the teacher, enabling her to choose the kind of knowledge suitable to her pupil's stage of development, warning her of the futility of attempting *over-*

development, saving her from the disappointment that results from expecting at one stage the kind of mental work that properly belongs to another (15).

247. In the preceding chapters we have briefly considered these stages of mental development and the thinking process. Thinking is seeing relations—or, perhaps more accurately, trying to see relations—and we have noted that the child begins very early to see relationships between himself and the objects in his environment (104). The objects acquire a meaning, a meaning that involves a *relationship* to himself and suggests a *behaviour* on his own part. Then he begins to recognize the relations of the objects to *one another*, e.g. sounds to the things from which they emanate; he refers the ticking to the clock, music to the piano or his musical box.

248. Although the child's thinking at this stage is confined to actual present objects, language is rapidly being associated with his experiences, helping to classify and organize his ideas. Children learn very early to use a number of abstract terms which express relationship. 'On' and 'under,' 'from' and 'to,' 'up' and 'down,' have a clear meaning for the little one because they are associated with certain simple relationships and have been learnt in connection with certain kinds of behaviour.

249. Then we found that there is a certain stage when words become *reminders* of things, the thinking is done through mental images and it is not necessary to have the objects really present.

And then we saw how, later on, those images become less and less definite, until, among adults, words which have no mental image at the back of them are sufficient for the inter-play of ideas and the communication of mind with mind.

250. But though for convenience sake we divide the total mental life into periods and speak of 'the child mind, the adult mind, and the senile mind,' we must not think that a hard and fast line divides each from each. The passing from infancy into childhood and from childhood into boy-and-girlhood is not like changing carriages on a railway journey. There is nothing sudden about it, nothing to tell us precisely when it happens. The mind is *one* mind all the time. The periods melt into each other, and some children of six have more intelligence and reasoning power than some others of eight. Nevertheless, about the seventh year there is a change in the condition of the brain, and that there is a corresponding difference in the kind of work a child can do after that is the experience of all educators. Therefore they call those first seven years the first period of childhood.

251. With which of those periods are you music teachers chiefly concerned? Manifestly with that difficult transition time when the knowledge-getting is largely through sense perception (and the teaching must therefore be mainly in the concrete), and partly through that power of imagining which is so marked an activity of the child-mind. It is just at this stage that mistakes are most likely to be made in the teaching of ordinary school subjects; some children being

kept too long at the concrete stage, to the detriment of memory and imagination, and others fed with a diet of mere words which do not correspond with anything in their experience.

252. But the music teacher is not so likely to make this kind of mistake, because *music is a concrete subject from start to finish*. From the first attempt to make the little pupil—who may not be very musical—notice the difference between high and low sounds, to the lessons in advanced harmony, every new fact must be presented to the pupil through the sense of hearing, if it is to be realized by the mind and if the pupil is ever to arrive at the power of hearing music when he looks at its notation. The reader who has taken in what we said about musical perception in the latter part of Chapter IV (133) will understand this.

253. The *bête noire* of the music teacher, especially of the young teacher, used to be the necessity of teaching beginners. But things have changed a good deal, and this fear of beginners is giving place to a special interest in them. The teacher who has some knowledge of the child mind and its behaviour and its development prefers beginners. We shall see additional reasons for this later on